Calgon Corporation
Post Office Box 1346
Pittsburgh, Pennsylvania 15230

Attention: Mr. C. L. Fitzgerald

H-204 MICROBIOCIDE
USDA Reg. No. 2914-8
Your letter of April 23, 1968

1. The dosage under intermittant treatment must be corrected as 16.5 to 66 fluid ounces per 1000 gallons does not equal 25 to 100 ppm of product.

Sincerely yours,

Harold G. Alford
Assistant Director
for Registration

Enclosure
Stamped Label
PR Form 9-26
ARS:PR:HSH:ibf/6/21/68

CALGON

H-204

MICROBIOCIDE

FOR CONTROL OF BACTERIA, ALGAE, DIATOMS, MOLD AND SLIME GROWTHS IN INDUSTRIAL WATER SYSTEMS

WARNING!

May be fatal if swallowed
May be absorbed through skin
Causes skin irritation

Do not get on skin, in eyes or on clothing. In case of contact, remove contaminated clothing and immediately wash skin with soap and water. If irritation persists get medical attention. In case of contact with eyes, immediately flush with water and get medical attention. Wash contaminated clothing before reuse.

Treated water may be harmful to fish and other aquatic life.

U.S.D.A. Registration No. 2914-8

CAUTION: KEEP OUT OF REACH OF CHILDREN
See panel at left for additional cautions

Net Wt. 435 Lbs.

DIRECTIONS FOR USE
SEE H-204 MICROBIOCIDE ON METAL PRODUCT BULLETIN

Active Ingredients ..... 31.62% min.
n-Alkyl (myristyl, palmityl, lauryl, stearyl) dimethyl benzyl ammonium chlorides
Bis (Tri-n-Butyltin) Oxide
Xylol

Inert Ingredients ..... 68.38% max.
Water

ACCEPTED
JUN 21 1968
UNDER THE FEDERAL INSECTICIDE FUNGICIDE AND RODENTICIDE ACT FOR ECONOMIC POISON REGISTERED UNDER NO. 2914-8 SUBJECT TO ATTACHED COMMENTS.

10445-4

Made in U.S.A.

H-204
MICROBIOCIDE

CALGON CORPORATION
CALGON CENTER • PITTSBURGH, PA.

H-204
MICROBIOCIDE

H-204
MICROBIOCIDE

CALGON CHEMICAL PRODUCT BULLETIN 24,14-3

description

H-204 Microbiocide is a pale yellow, liquid, organic biocide containing both quaternaries and organo-metallic compounds formulated for use in industrial water systems.

purpose

H-204 prevents growths of microorganisms encountered in nonpotable, industrial water systems. It also forms a biocidal film, resistant to water leaching, on wood and metal surfaces in the system, thus providing residual treatment for considerable lengths of time.

advantages

1. Non-oxidizing; safe for cooling tower wood.
2. Non-corrosive to metals; contains no copper or mercury salts.
3. Helps protect cooling tower wood from fungus attack.
4. Non-flammable.
5. Compatible with other treatments.
6. Maximum biocidal efficiency for a wide spectrum of organisms.
7. Surface-active properties aid in cleaning system.

feed requirements

For continuous feeding, 5 to 15 ppm of product is recommended. Feed at a rate of 0.63 to 2.0 fluid ounces per thousand gallons of make-up water.

Intermittent treatment requires 25 to 100 ppm of product. Slug feed at a rate of 5.5 to 66 fluid ounces per thousand gallons of system water volume.

method of feeding

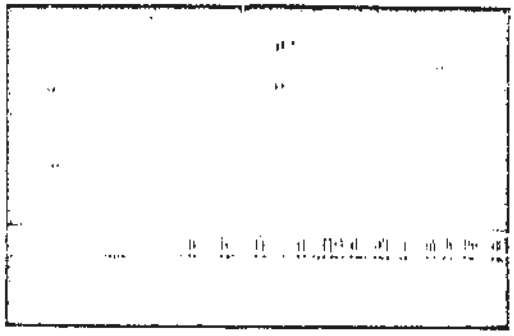
H-204 should be fed as received and not diluted with water or mixed with any other chemical feed solution. It can form potentially explosive materials when mixed with strong oxidizing agents such as chlorine.

control

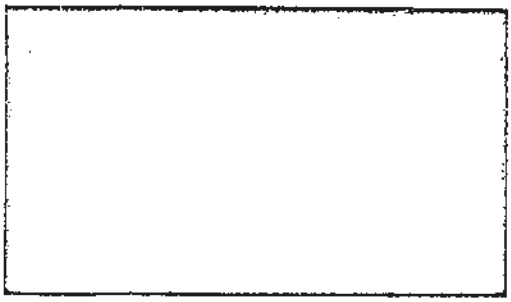
No control testing is necessary other than visual or microscopic examination of growths.

specifications

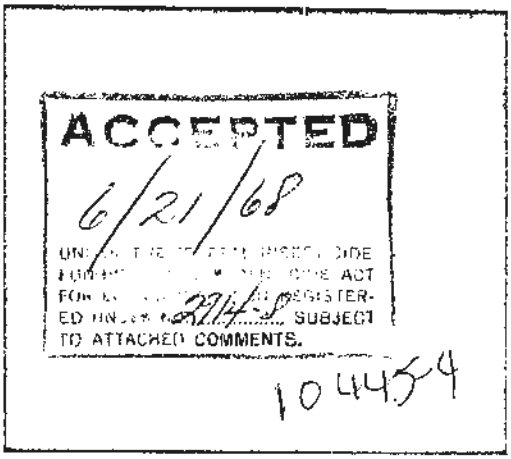
Appearance	pale yellow liquid
Odor	pungent
Specific gravity	0.98
Weight/gallon	8.17 lbs.
Flash point, TOC	above 200° F.
pH, 1% solution	7.6
Viscosity	19 cps @ 25° C.
Freezing point	31° F.



Redwood cooling tower slat showing severe chemical surface attack (delignification) caused by excessive chlorine used to combat bacteria and algae. H-204 Microbiocide, chemically inert toward wood, will not cause this problem. In fact, it can penetrate the wood subsurface to kill organisms growing there without damaging the wood itself.



Unless checked by proper treatment, thick slimy accumulations of algae can form on water distribution pans. These growths also clog screens and strainers, slow down the water flow, reduce heat transfer, and cause high head pressure.



Microscopic organisms breed rapidly in open recirculating water systems and impair the efficient operation of cooling towers. Sunlight, warm water, oxygen and nutrients of air-borne or process origin can stimulate prolific growths of algae, molds, diatoms or bacteria in the absence

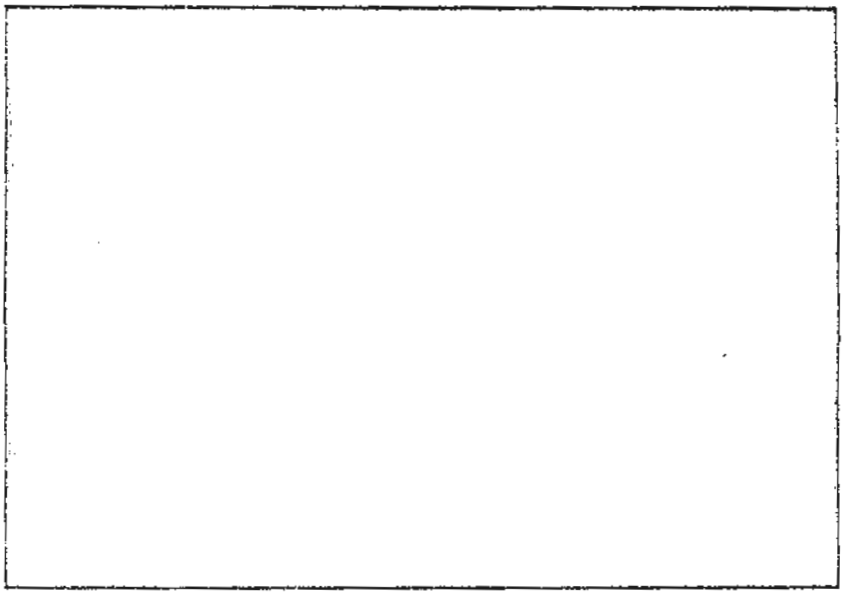
storage

Store out of children's reach. Do not transfer H-204 from original container except for immediate use. H-204 is stable at room temperature. Some crystals may form when stored at temperatures below 31° F., but rewarming will return it to original condition with biocidal properties unimpaired.

2974-8

packaging

Available in 5 gallon can 40 lbs. net, and in 55 gallon non-returnable steel drums, 435 lbs. net. Freight classification: Disinfectants, other than medicinal and other toilet preparations.



Micrograph (430x) showing strands of *Ulothrix*, a green algae. Heavy growths of these simple aquatic plants can plug heat exchangers, pump strainers, lines and valves and coat wooden slats of cooling towers.

ACCEPTED

JUN 21 1968

UNDER THE FEDERAL INSECTICIDE FUNGICIDE AND RODENTICIDE ACT FOR ECONOMIC POISON REGISTERED UNDER NO. 2974-8 SUBJECT TO ATTACHED COMMENTS.

10445-4

RECEIVED APR 25 1968

For further information write to Cooling and Municipal Water Department, Water Management Division, Calgon Corporation, Box 1346, Pittsburgh, Pa. 15230

CALGON CORPORATION